# Belt Drive
# Fully Automatic Turntable

**MCS Series® Model 6205**

## Owner's Manual

**JCPenney**

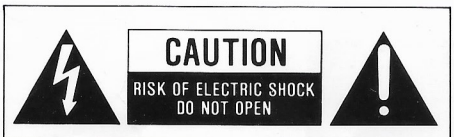
Dear Audiophile

This product has been carefully engineered and manufactured to give you many years of dependable operation. Please read this manual thoroughly before operating your unit to become familiar with its features and obtain all the benefits of this fine audio component. If there are any questions regrading the operation of your new equipment, or if you need to have it serviced, you may use the enclosed directory to locate your nearest RCA Factory Service facility.

Retain this manual for future reference.

## Contents


1. Introduction
1. Features
1. Specifications
2. Packing List
2. Precautions
2. Suggestions for safety
3. Assembly
3. Connections
4. Operation
5-6. Adjustments
6. Hints for Better Performance
7. Maintenance
8-9. Troubleshooting Guide
9. Service


CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, wihtin an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**Warning:**

**To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.**

Model No. _____

Serial No. _____

Record and retain these numbers which are located on the back and the bottom of the unit.

## Introduction

A turntable must faithfully pick up and send to the amplifier or receiver all of the information stored in a record's grooves. Since the turntable is at the beginning of the phono sound reproduction chain, it has a significant effect on the equality of the sound that is reproduced by the speakers.

To assure consistently outstanding performance, the 6205 employs a frequency generator servo DC motor to drive the platter and a special vibration absorbing base to prevent howling. To make record play as easy as possible, operations are fully automatic (except for certain non-standard records). All you do is press the start/stop switch (except for 45 rpm records) and let the 6205 do the rest while you relax and enjoy the music.

Each part and control of this turntable is described in this manual. Before operating the turntable for the first time, please read this manual to acquaint yourself with its operations.

## Features

### Precision Belt-Drive System with Frequency Generator (FG) Servo DC Motor

The turntable is driven by a frequency generator servo motor that instantly detects and corrects even the slightest deviations from the correct rotational speed. The drive belt is manufactured to resist changes in temperature and humidity to guarantee consistently dependable performance.

### Fully Automatic Operation and Front Panel Controls

All controls are located on the front panel for convenience and simplicity. That means you can start and stop record play and even perform cueing without lifting the dust cover. Fully automatic operation means all you have to do is place a record on the platter, close the dust cover and press the start/stop switch to play a record.

### Equipped with Plug-in Connector Moving Magnet Stereo Cartridge

The 6205's moving magnet type cartridge features an all laminated core in the magnetic circuit to provide a wide frequency response that is linear to within ±1 dB from 20 Hz to 10 kHz. The plug-in connector eliminates headshell and lead wire problems to make it easier to change cartridges and eliminates worries about resonances and poor electrical contacts.

### Special Vibration-Absorbing Base Material

A special developed damping material is used to absorb vibrations and damp resonances so there is no need to worry about acoustic feedback (howling).

### Other Features

- Straight static-balanced tonearm
- Electronic soft-touch start/stop switch
- Fine speed adjustment (pitch control)
- Stroboscope/pilot lamp
- Electronic speed switching instead of mechanical
- Automatic record size selection
- Large aluminum die-cast turntable platter
- Attractive slim-line styling

## Specifications

### General

Power Requirements: 120 V AC, 60 Hz

Power Consumption: 3 Watts

Dimensions: Width 16-15/16" (43 cm) × High 3-15/16" (10 cm) × Depth 14-3/4" (37.5 cm)

(Maximum height when the dust cover is open. Height 14-9/16" (37 cm) × Depth 16-1/8" (41 cm))

Weight: 7.7 lbs. (3.5 kg)

### Turntable Section

Type: Fully Automatic Turntable

Driving Method: Belt Drive

Motor: DC Motor with Frequency Generator Servo

Turntable Platter: Aluminum Die-cast 12" (30.4 cm) Diameter.

Turntable speeds: 33⅓ and 45 rpm

Pitch Control: ±6% Adjustment Range

Speed Change Method: Electronic Change

Wow and Flutter: 0.05% WRMS (JIS C5521) ±0.08% Peak (IEC 98A Weighted)

Rumble: −70 dB (IEC 98A Weighted)

### Tonearm Section

Type: Plug-in Connector Straight Tonearm, Static-balanced Type

Effective Length: 9-1/16" (23 cm)

Overhang: 19/32" (1.5 cm)

Tracking Error Angle: Within 2°32′ [at the outer groove of a 12" (30 cm) record]. With in 0°32′ [at the inner groove of a 12" (30 cm) record]

Effective Mass: 13.5 g (Including Cartridge)

Phono Cable Capacitance: 100 pF

### Cartridge Section

Type: Plug-in Connector Type Moving Magnet Stereo Phono Cartridge

Magnetic Circuit: All Laminated Core

Frequency Response: 10 Hz~35 kHz, 20 Hz~10 kHz ± 1 dB

Output Voltage: 2.5 mV at 1 kHz, 5 cm/s, Zero to Peak. Lateral Velocity [7 mV at 1 kHz, 10 cm/s, Zero to Peak 45° Velocity DIN 45 500)]

Channel Separation: 22 dB at 1 kHz

Channel Balance: Within 1.8 dB at 1 kHz

Recommended Load Impedance: 47 kΩ~100 kΩ

Compliance (Dynamic): $12 \times 10^{-6}$ cm/dyne at 100 Hz

Tracking Force Range: 1.25 ± 0.25 g (12.5 ± 2.5 mN)

Weight: 6 g (Cartridge Only)

Replacement Stylus: EPS-23CS

## Packing List

The following is a list of the items supplied with the 6205 turntable

1—Turntable Mat

1—AC Power Cord

1—Phono Cable

1—Ground Wire (GND)

1—45 rpm Adaptor

1—Owner's Manual

1—Warranty

1—Service Information

## Precautions

### Placement

Place the unit on a level surface convenient to an AC outlet supplying ordinary household current (120 volts 60 Hz.)

**Caution:** Connecting the unit to any voltage other than 120 volts 60 Hz AC, may damage the unit.

Avoid placing the unit in direct sunlight or close to heat radiating appliances such as electric heaters.

Do not place the unit near or on top of a power amplifier, since power amplifiers generate a lot of heat.

Keep the unit away from areas subject to vibrations. Avoid placing the unit in areas of high humidity or moisture. When mounting the unit on a shelf, ensure that the shelf supports are secure.

### Ventilation

Install the unit where there is good air circulation.

Do not obstruct the ventilation openings of the cabinet.

### Operation

Do not attempt to hold the turntable platter while it is rotating, as this may damage the belt or cause it to slip off the turntable platter.

Do not grasp or hold the tonearm during automatic operation.

Secure the tonearm with the arm clamp when not in use.

## Suggestions for safety

**Before using this unit, be sure to read applicable items of the Owner's Manual and these safety suggestions carefully. Be sure to retain this manual for future reference. Take special care to follow the warnings indicated on the unit itself as well as in the Owner's Manual.**

### Avoid places where there is water or humidity.

Do not use this unit near a bathtub, washbasin, swimming pool, or any objects containing water. Damp basements should also be avoided.

### Do not allow water or any foreign object to get inside this unit.

Do not place small metal objects or anything containing liquid on or near the unit.

### Care of the power cord and plug.

Do not bend the power cord sharply (especially near its connection to the unit or near the plug), or place anything on it. Be careful not to pinch, crush or fray the cord and never touch the plug or cord when your hand is wet. Always hold cord by the plug when connecting and disconnecting it to a wall socket.

### If the unit will not be used for an extended period of time:

Be sure to disconnect the power cord from the wall outlet.

### Maintenance

Refer to page 9 for details.

### Never attempt repairs yourself if:

(a) If the power cord or plug is damaged.
(b) If a foreign object has fallen or liquid has spilled into it.
(c) If the unit is exposed to water.
(d) If the unit does not function normally, or if operation shows a distinct change in performance.
(e) If the unit has been dropped and the cabinet or chassis is damaged.

Unplug the power cord and have it checked by a qualified technician (or the dealer from whom the unit was purchased or the nearest RCA Factory Service Center).

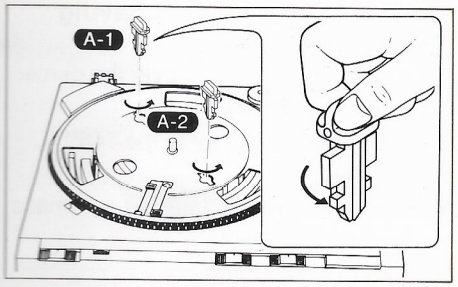
### Repairs

Except for adjustments explained in this manual, do not attempt any repairs yourself. Be sure to request service from a qualified technician (or your dealer or nearest RCA Factory Service Center).

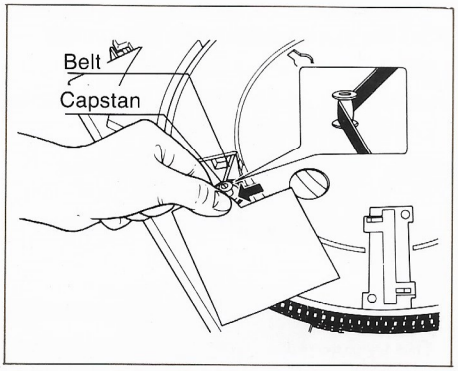
## Assembly

In order to avoid damage due to vibration or shock incurred during transport, this unit is packed with turntable spacers (A-1, A-2). Be sure to remove these before use. Keep spacers for reuse should it become necessary to transport the unit again.

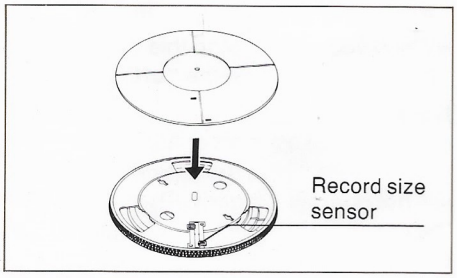
1. Remove turntable spacers A-1 ~ A-2.




2. Holding the belt by the attaching sheet, fit the belt around the capstan. Then remove the sheet.



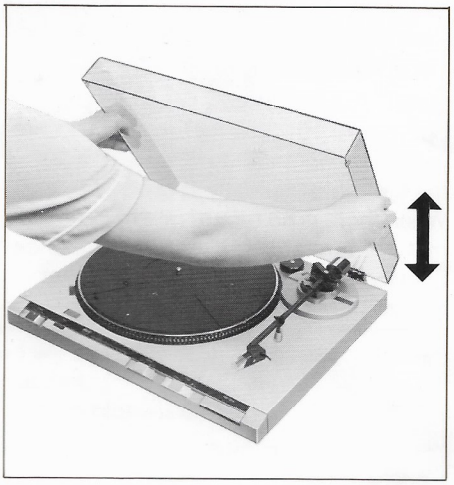

3. Place the turntable mat on the platter. Be sure the slot in the mat is over the protrusion (record size sensor) on the platter.




**Note:** After placing the mat on the platter, turn the platter clockwise about ten full rotations by hand.
This is necessary to assure correct operation of the automatic mechanism.

4. Hold both sides of the cover and lower it into the hinge slots. To remove the cover, open it fully and pull upward.

**Note:** Opening or closing the cover during play may cause vibrations and groove skipping.
If you must open the cover during play, do so very gently.



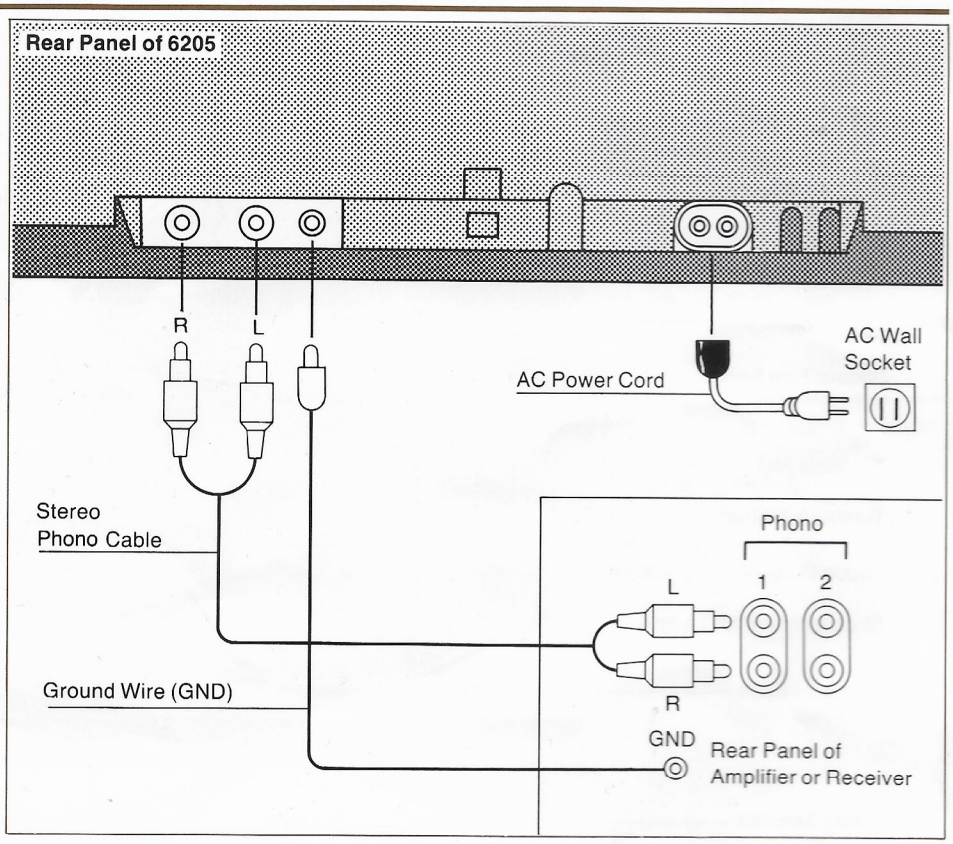
## Connections

**Note:** Do not stand this unit on its side or turn it upside down when making connections as the turntable mat could come loose and damage the stylus tip. Make all connections before removing the protective materials.

Use the stereo phono cable to connect the turntable to your amplifier or receiver. Be sure that the white (L) plugs are connected to the left channel jacks and the red (R) plugs are connected to the right channel jacks. Plug the ground wire into the turntable's ground jack and connect the wire to the amplifier or receiver's ground (GND) screw.

Finally, plug the female end of the AC power cord into the turntable power jack and the other end into an AC wall socket or the AC outlet on the rear panel of your amplifier or receiver. Note that hum may occur if you neglect to connect the ground wire.

**Caution:** Do not connect the plug to any power supply other than AC 120 Volts/ 60 Hz to avoid damaging the unit.



# Operation

## Automatic play

- Put a record on the turntable mat.
- Remove the stylus protector.
- Release the arm clamp.
- Set the speed selector to the correct speed.
- Push the start/stop switch.
  The tonearm automatically selects the record size [for 12" (30 cm) and 7" (17 cm) records only]. The stroboscope/pilot lamp lights up and begins play.
- At the end of the record, the tonearm will automatically return to the arm rest and the unit will shut off.

**Note:** The record size sensor does not operate for 10" (25 cm) records or other records of non-standard sizes. Operate the turntable manually in such cases. When there is no record on the turntable mat, the turntable platter will rotate once or twice but the tonearm will not move toward the center spindle.

## Manual play

- Put a record on the turntable mat.
- Remove the stylus protector.
- Release the arm clamp
- Set the speed selector to the correct speed.
- Set the cue switch to the **"up"** position.
- Move the tonearm over the desired groove by hand. The stroboscope/pilot lamp lights up and the platter will start turning.
- Set the cue switch to the **"down"** position.
  The tonearm will descend and will begin playing.
  At the end of the record, the tonearm will automatically return to the arm rest and unit will shut off.

## Repeat play

- Set the repeat switch to **"on"** position when you want to repeat play.
- When you want to stop this cycle, set the repeat switch to the **"off"** position.

**Note:** Do not touch the repeat switch during automatic start or automatic return operation as the repeat function will not operate properly. The setting of the repeat switch should be changed only when the tonearm is in the arm rest.

## Stopping

- Push the start/stop switch.
  The tonearm will return to the arm rest and the unit will shut off.

## Temporarily interruption play

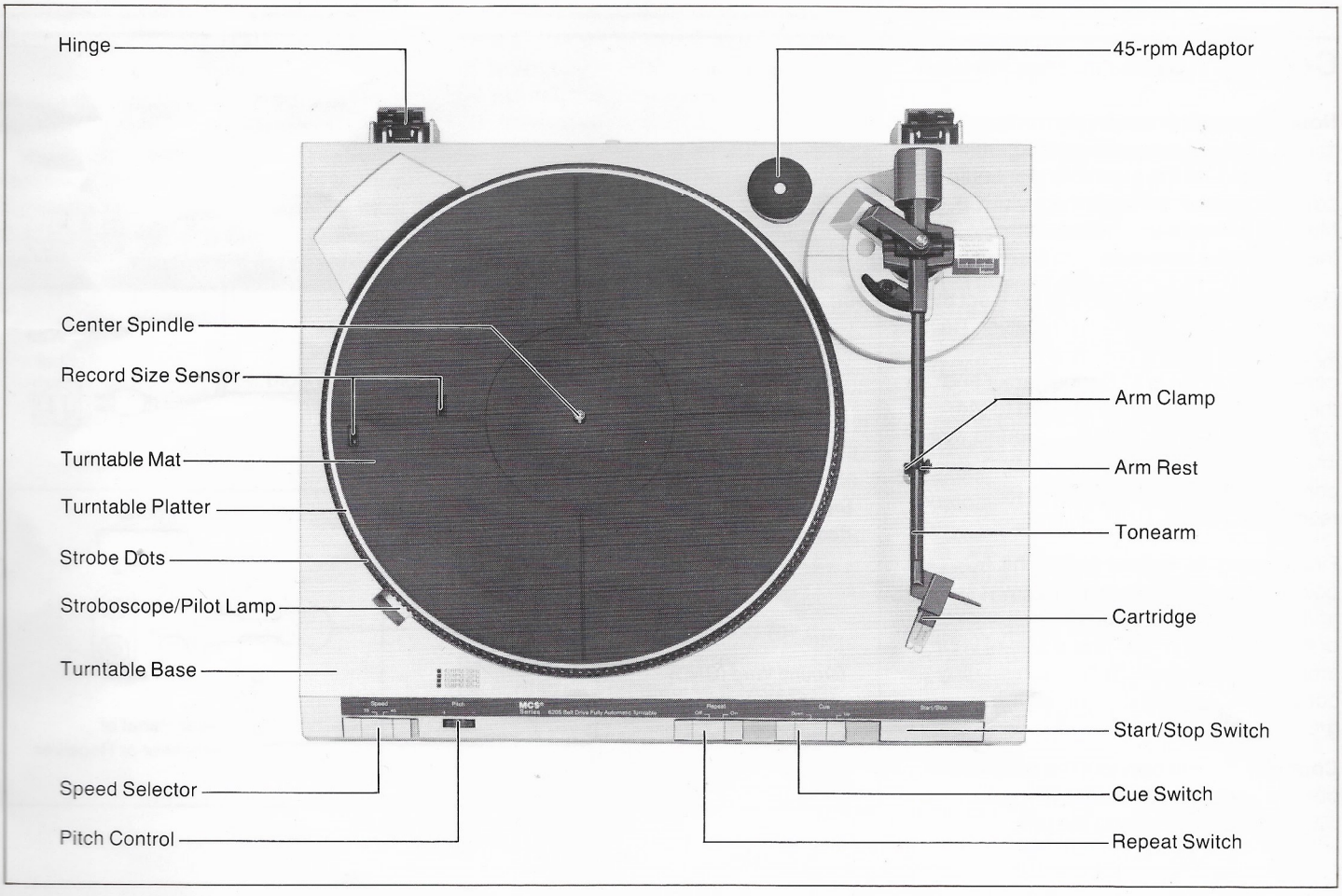
- Set the cue switch to the **"up"** position. This will make the tonearm rise off the record.
  Set the cue switch to the **"down"** position, the tonearm will descend slowly on the record and resume playing.

## Playing 45-rpm records having large center holes

- Put the 45-rpm adaptor over the center spindle.
- Set the speed selector to the **"45"** position.
- Perform the same manner as automatic play or manual play.

## If the unit is not to be used for some time

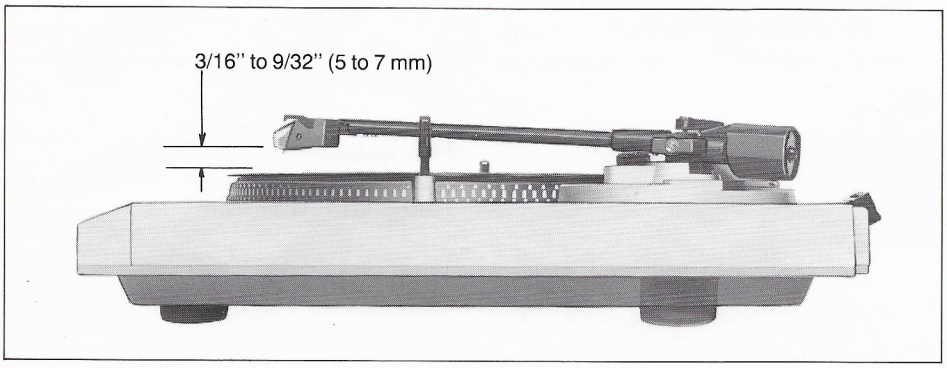
- Secure the tonearm with the arm clamp.
- Close the dust cover.



# Adjustments

### Arm-lift height adjustment

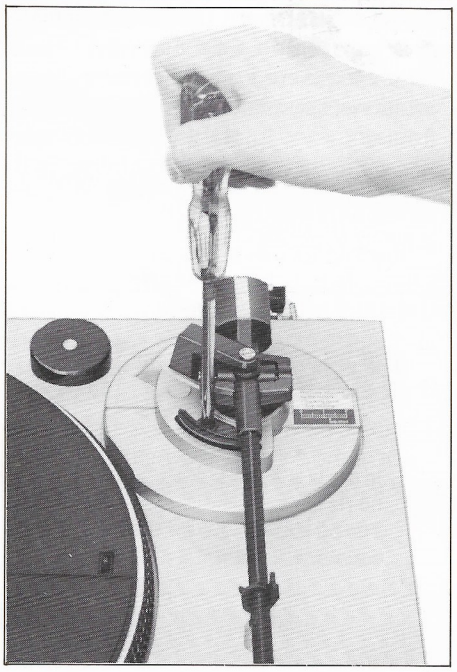
- The arm-lift height (clearance between the stylus tip and the record surface when the cue switch is at the **"up"** position) has been adjusted at the factory to approximately 3/16" to 9/32" (5 to 7 mm)




- If the clearance is too narrow or too wide, turn the adjustment screw clockwise or counterclockwise.

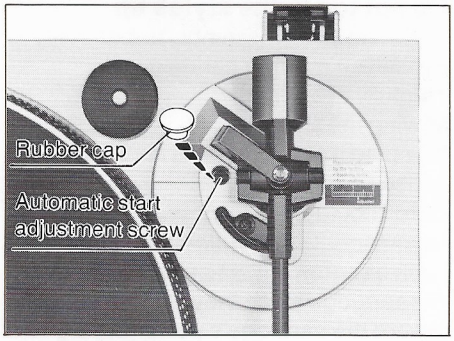
**Clockwise rotation**
—clearance between the record and stylus tip is decreased.

**Counterclockwise rotation**
—clearance between the record and stylus tip is increased.



### Adjustment to automatic start position

- If the stylus tip does not land in the lead-in groove, adjust as follows.
- Clamp the tonearm to the arm rest.
- Remove the rubber cap.
- Turn the screw with a screwdriver, clockwise or counterclockwise only a little at a time as necessary.



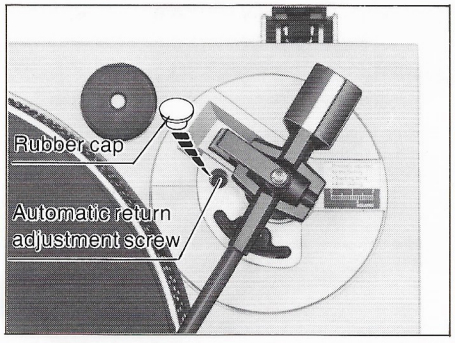

- if the stylus tip sets down too far in the recorded groove.
  **—turn counterclockwise.**
- If the stylus tip sets down outside of the record.
  **—turn clokwise.**
- Adjust so the stylus tip lands 1/32" to 1/16" (1 to 2 mm) in from the edge of the record.

**Note:** The automatic start and automatic return adjustment screws are located togeher.

- When the tonearm is in or near the arm rest, the automatic start adjustment screw is visible.
  When the tonearm is near the center of a record, the automatic return adjustment screw is visible.

### Adjustment to automatic return position

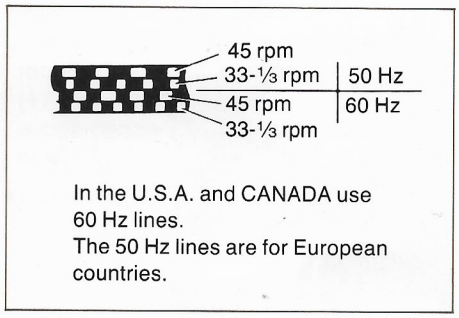
- Remove the rubber cap.
- Release the arm clamp
- Hold the tonearm and move the tonearm toward the center of the record. The automatic return adjustment screw will appear.




- If the tonearm tends to return to the arm rest before the play has finished,
  **—turn counterclockwise.**
- If the tonearm fails to return after the final groove,
  **— turn clockwise.**

### Speed adjustment (pitch control)

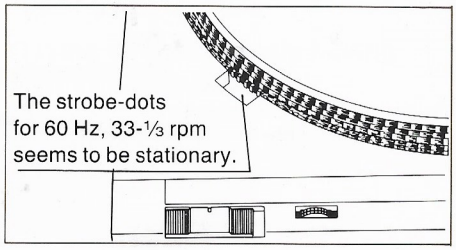
- There are strobe dots cut on this turntable platter to indicate correct rotational speed according AC power frequency and turntable speeds.
- If the strobe-dots appear to be moving as the turntable rotates, adjust while playing a record.




In the U.S.A. and CANADA use 60 Hz lines.
The 50 Hz lines are for European countries.

- Set the speed selector to the speed to be adjusted.
- Watch the illuminated dots on the side of the platter. Turn the pitch control one way or the other until the dots appear to stand still. This is the correct speed.
- Turning the pitch control in the "+" direction increases the speed.
- Turning the pitch control in the "−" direction decreases the speed.

**Note:**
**Strobe dot pattern;** This unit's stroboscope/pilot lamp operates at the AC line frequency which generally has a 0.2% fluctuation.
This fluctuation, when present, may make the strobe pattern appear to change. However, actual turntable speed does not change, because the DC motor is not affected by AC power line frequency.




## Hints for Better Performance

### Do not touch the stylus tip

Since the stylus assembly is extremely delicate, it must be handled very carefully at all times.
Moving the stylus tip with your finger of bumping it against a hard surface can cause serious damage.
Care should be taken to avoid bringing ferromagnetic (iron, steel, etc.) objects such as screwdrivers or tweezers near the cartridge since they may be pulled toward the cartridge's powerful magnets and thereby damage the stylus.

### Remove dust and dirt from the stylus tip

Playing the record with dust and dirt adhering to the stylus tip not only adversely affects sound quality but accelerates abrasion of the record and stylus tip. Carefully remove dust and dirt by moving the brush from the base of the cantilever to the stylus tip.

**Note:**
**Before playing, carefully wipe the record with a high quality record cleaner.**

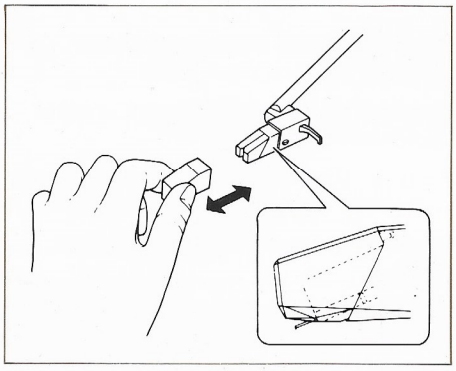
### Records having sizes other than 7" or 12" (17 cm or 30 cm) should be played manually.

Your turntable is designed for automatic operation (Automatic start, Automatic return) of a record that adheres to accepted industry dimensions.
Therefore, use the unit manually for records other than standard sizes. Also warped records or those especially thinner or the hole of your record is off the center of grauing that standard should only be played manually.

# Maintenance

## Stylus Replacement

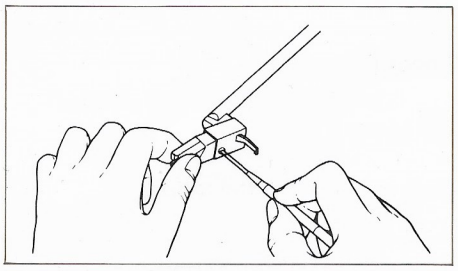
**The replacement stylus for this cartridge is EPS-23CS.**
The life of the stylus varies according to the conditions of use. Noise or scratchiness may indicate a worn or damaged stylus. To prevent damage to your records, the stylus should be replaced at the first sign of damage. Therefore, follow these instructions. There should be no gap between the stylus assembly and the cartridge body.



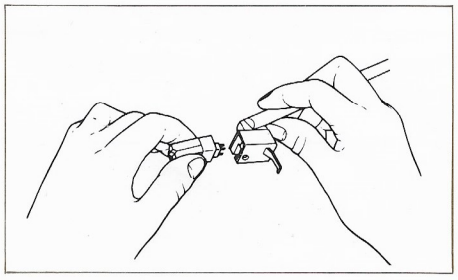
**Note:** Be sure you have the amplifier volume knob turned down all the way to avoid amplification of shock noise produced when handing the stylus and cartridge. This unit is equipped with a diamond stylus.

## Cartridge replacement

Hold the tonearm to the arm rest with the arm clamp. Remove the cartridge attachment screw.

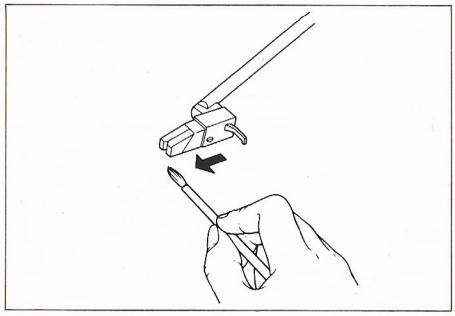


Carefully pull the cartridge out from the tonearm being sure you don't touch the stylus tip.
Align the pins on the new cartridge with the tonearm connector and plug it into the tonearm as far as it will go. Tighten the cartridge attachment screw.



## General

Keep your records free of dust and finger marks by cleaning records regularly. A cleaning kit is available at JCPenney for your convenience.
The cartridge stylus is an extremely delicate and precisely manufactured device designed for picking up the subtle nuances of the record grooves. Therefore, be very careful not to touch it, push on it, or apply excessive force in any way. The stylus tip cannot retain proper groove contact when it is dirty. This causes bad sound reproduction and excess wear on the stylus tip and grooves. Therefore, use the brush to remove dust and dirt by brushing toward the direction of the arrow.



Keep records and tapes stored vertically in their protective jackets and away from heat to avoid damage.

## Cleaning

**Warning:** To prevent fire or shock hazard, disconnect your unit from the AC power source when cleaning. Never use volatile cleaners such as alcohol, benzine or thinner. Do not use chemically treated dust cloths. Do not expose the panel to insecticide spray. To remove stubborn spots, wipe the cabinet with a soft cloth slightly moistened with a mild soap and water solution.
Do not wipe the dust cover during play, or the tonearm may be attracted toward the dust cover due to the generation of static electricity.

# Troubleshooting Guide

| Problem | Cause | Remedy |
|---|---|---|
| Unit does not rotate.<br>Unit does not start when start switch is pushed. Stroboscope/pilot lamp does not light up. | There is no record on turntable mat. Put a record. Power cord not plugged in. The amplifier is not turned on. (This applies when the 6205 is plugged into amplifier's "switched" AC outlet.) | Check all Connection<br>Turn on amplifier |
| Play begins but there is no sound (during record play). | Speaker cords are disconnected. | Connect speaker cables. Check correct polarity (+ and −). |
| | Phono plugs are disconnected from amplifier's phono input jacks. | Connect phono output cords. Check L and R connections. |
| | Amplifier's tape monitor switch is set to "tape" position. | Set to "source" when not playing tapes. |
| | Amplifier's input source selector is set to "tuner" or "aux". | Set to "phono". |
| | Amplifier's speaker selector is at "off" position. | Set to "main" or "remote". |
| | Amplifier's volume is turned all the way down. | Turn up volume. |
| | Belt does not fit around capstan.<br>Packing materials have not been removed. | Fit belt around capstan.<br>Remove packing materials. |
| Volume is too low. | Amplifier muting is on. | Set to 0 dB or off. |
| A hum is heard. | Ground wire is not connected. | Connect to Amplifier's GND terminal.<br>Try reversing AC power plug in the wall socket. |
| | The turntable is too close to amplifier. | Place unit farther away from power amplifier (or integrated amp). |
| Stylus tip skips grooves. | Record is warped. | Check for warps and try another record. |
| | Unit is placed where it easily picks up vibrations. | Set unit in a position where it will be less susceptible to external vibrations. |
| | Dust or dirt on the stylus tip. | Clean stylus tip. |
| Record sounds scratchy and/or muffled. | Record is scratched or damaged | Adjust amplifier's tone controls to cut out high-frequency noise. |
| | Record is dusty or dirty. | Use a record cleaner to remove dust and dirt from grooves. |
| | Stylus tip is dusty. | Clean stylus tip. |
| | Stylus tip is worn. | If there is still noise when a good new record is played, you should replace stylus. |
| During automatic play, the stylus does not drop into the lead-in grooves. | Record diameter does not conform to industry standards. | Follow manual play using cue switch. |

| Problem | Cause | Remedy |
|---|---|---|
| Tonearm does not automatically return to the start position at the end of record. | Record does not conform to industry standard dimensions. | Push start/stop switch. |
| Tonearm does not descend on record | Cue switch in "up" position | Set cue switch "down" position |
| Tonearm does not move from its rest | Tonearm clamped in its rest | Release arm clamp from tonearm. |

## Service

Please contact the nearest RCA Factory Service Center if the need for service should ever become necessary. Consult the customer information packet included with your merchandise or the telephone directory white pages under RCA Service Company for the nearest RCA Factory Service Center in your area. If an RCA Factory Service Center is not located in your area, please contact the nearest JCPenney store.

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